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Date: July 17, 2001

By:

Carol A. See

PATENT
Docket No. GC527C3

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Estell et al.

Serial No.: 09/768,080

Filed: January 23, 2001

For: Proteins Producing an Altered
Immunogenic Response and
Methods of Making and Using
the Same

Group Art Unit: 1645

Examiner: Unassigned

STATEMENT OF SAMENESS

BOX MISSING PARTS
Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with 37 CFR 1.821(e) or 1.821(f) or 1.821(g) or 1.825(d), the computer readable copy of the sequence listing, and the paper copy submitted herewith in the above application are believed to be the same. The present submission contains no new matter relative to the application as originally filed.

Respectfully submitted,

Date:

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Registration No. 35,696

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Fax: 650-845-6504



#6

SEQUENCE LISTING

<110> Estell, David
Harding, Fiona

<120> PROTEINS PRODUCING AN ALTERED IMMUNOGENIC RESPONSE AND
METHODS OF MAKING AND USING THE SAME

<130> GC527C3

<140> US 09/768,080

<141> 2001-01-23

<150> US 09/677,822

<151> 2000-10-02

<150> US 09/500,135

<151> 2000-02-08

<150> US 09/060,872

<151> 1998-04-15

<160> 240

<170> PatentIn Ver. 2.1

<210> 1

<211> 1495

<212> DNA

<213> Bacillus amyloliquefaciens

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<221> mat_peptide

<222> (417)..(1495)

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<221> CDS

<222> (96)..(1244)

<220>

<221> misc_feature

<222> (582)..(584)

<223> The nnn at positions 582 through 584 which in a
preferred embodiment (aat) is to code for
asparagine, but which may also code for proline.

<220>

<221> misc_feature

<222> (585)..(587)

<223> The nnn at positions 585 through 587 which in a
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<220>

<221> misc_feature

<222> (597)..(599)

<223> The nnn at positions 597 to 599 which in a

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asparagine, but which may also code for aspartic acid.

<220>

<221> misc_feature

<222> (678)..(680)

<223> The nnn at positions 678 through 680 which in a
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alanine, but which may also code for serine.

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<221> misc_feature

<222> (681)..(683)

<223> The nnn at positions 681 through 683 which in a
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<221> misc_feature

<222> (708)..(710)

<223> The nnn at positions 708 through 710 which in a
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alanine, but which may also code for aspartic acid.

<220>

<221> misc_feature

<222> (711)..(713)

<223> The nnn at positions 711 through 713 which in a
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aspartic acid, but which may also code for alanine.

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<221> misc_feature

<222> (888)..(890)

<223> The nnn at positions 888 through 890 which in a
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threonine, but which may also code for serine.

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<221> misc_feature

<222> (891)..(893)

<223> The nnn at positions 891 through 893 which in a
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serine, but which may also code for threonine.

<220>

<221> misc_feature

<222> (1167)..(1169)

<223> The nnn at positions 1167 through 1169 which in
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glutamic acid, but which may also code for glutamine.

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ttattctgca aatgaaaaaa aggagaggat aaaga atg aga ggc aaa aaa gta 113
Met Arg Gly Lys Lys Val

tgg atc agt ttg ctg ttt gct tta gcg tta atc ttt acg atg gcg ttc	161
Trp Ile Ser Leu Leu Phe Ala Leu Ala Leu Ile Phe Thr Met Ala Phe	
-100 -95 -90	
ggc agc aca tcc tct gcc cag gcg gca ggg aaa tca aac ggg gaa aag	209
Gly Ser Thr Ser Ser Ala Gln Ala Ala Gly Lys Ser Asn Gly Glu Lys	
-85 -80 -75 -70	
aaa tat att gtc ggg ttt aaa cag aca atg agc acg atg agc gcc gct	257
Lys Tyr Ile Val Gly Phe Lys Gln Thr Met Ser Thr Met Ser Ala Ala	
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aag aag aaa gat gtc att tct gaa aaa ggc ggg aaa gtg caa aag caa	305
Lys Lys Lys Asp Val Ile Ser Glu Lys Gly Gly Lys Val Gln Lys Gln	
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Phe Lys Tyr Val Asp Ala Ala Ser Ala Thr Leu Asn Glu Lys Ala Val	
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Val Ala His Ala Tyr Ala Gln Ser Val Pro Tyr Gly Val Ser Gln Ile	
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Val Ala Val Ile Asp Ser Gly Ile Asp Ser Ser His Pro Asp Leu Lys	
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Val Ala Gly Gly Ala Ser Met Val Pro Ser Glu Thr Xaa Xaa Phe Gln	
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gac nnn aac tct cac gga act cac gtt gcc ggc aca gtt gcg gct ctt	641
Asp Xaa Asn Ser His Gly Thr His Val Ala Gly Thr Val Ala Ala Leu	
60 65 70 75	
aat aac tca atc ggt gta tta ggc gtt gcg cca agc nnn nnn ctt tac	689
Asn Asn Ser Ile Gly Val Leu Gly Val Ala Pro Ser Xaa Xaa Leu Tyr	
80 85 90	
gct gta aaa gtt ctc ggt nnn nnn ggt tcc ggc caa tac agc tgg atc	737
Ala Val Lys Val Leu Gly Xaa Xaa Gly Ser Gly Gln Tyr Ser Trp Ile	
95 100 105	
att aac gga atc gag tgg gcg atc gca aac aat atg gac gtt att aac	785
Ile Asn Gly Ile Glu Trp Ala Ile Ala Asn Asn Met Asp Val Ile Asn	
110 115 120	

atg agc ctc ggc gga cct tct ggt tct gct gct tta aaa gcg gca gtt	833
Met Ser Leu Gly Gly Pro Ser Gly Ser Ala Ala Leu Lys Ala Ala Val	
125 130 135	
gat aaa gcc gtt gca tcc ggc gtc gta gtc gtt gcg gca gcc ggt aac	881
Asp Lys Ala Val Ala Ser Gly Val Val Val Val Ala Ala Ala Gly Asn	
140 145 150 155	
gaa ggc nnn nnn ggc agc tca agc aca gtg ggc tac cct ggt aaa tac	929
Glu Gly Xaa Xaa Gly Ser Ser Ser Thr Val Gly Tyr Pro Gly Lys Tyr	
160 165 170	
cct tct gtc att gca gta ggc gct gtt gac agc agc aac caa aga gca	977
Pro Ser Val Ile Ala Val Gly Ala Val Asp Ser Ser Asn Gln Arg Ala	
175 180 185	
tct ttc tca agc gta gga cct gag ctt gat gtc atg gca cct ggc gta	1025
Ser Phe Ser Ser Val Gly Pro Glu Leu Asp Val Met Ala Pro Gly Val	
190 195 200	
tct atc caa agc acg ctt cct gga aac aaa tac ggg gcg tac aac ggt	1073
Ser Ile Gln Ser Thr Leu Pro Gly Asn Lys Tyr Gly Ala Tyr Asn Gly	
205 210 215	
acg tca atg gca tct ccg cac gtt gcc gga gcg gct gct ttg att ctt	1121
Thr Ser Met Ala Ser Pro His Val Ala Gly Ala Ala Ala Leu Ile Leu	
220 225 230 235	
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Ser Lys His Pro Asn Trp Thr Asn Thr Gln Val Arg Ser Ser Leu Xaa	
240 245 250	
aac acc act aca aaa ctt ggt gat tct ttc tac tat gga aaa ggg ctg	1217
Asn Thr Thr Thr Lys Leu Gly Asp Ser Phe Tyr Tyr Gly Lys Gly Leu	
255 260 265	
atc aac gta cag gcg gca gct cag taa aacataaaaa accggccttg	1264
Ile Asn Val Gln Ala Ala Ala Gln	
270 275	
gccccgccgg tttttttatt tttcttcctc cgcattgttca atccgctcca taatcgacgg	1324
atggctccct ctgaaaattt taacgagaaa cggcggggtg acccggtca gtcccgtaac	1384
ggccaagtcc tgaaacgtct caatcgccgc ttcccggtt cgggtcagct caatgccgta	1444
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<212> PRT

<213> Bacillus amyloliquefaciens

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          85          90          95
Tyr Val Glu Glu Asp His Val Ala His Ala Tyr Ala Gln Ser Val Pro
          100          105          110
Tyr Gly Val Ser Gln Ile Lys Ala Pro Ala Leu His Ser Gln Gly Tyr
          115          120          125
Thr Gly Ser Asn Val Lys Val Ala Val Ile Asp Ser Gly Ile Asp Ser
          130          135          140
Ser His Pro Asp Leu Lys Val Ala Gly Gly Ala Ser Met Val Pro Ser
          145          150          155          160
Glu Thr Xaa Xaa Phe Gln Asp Xaa Asn Ser His Gly Thr His Val Ala
          165          170          175
Gly Thr Val Ala Ala Leu Asn Asn Ser Ile Gly Val Leu Gly Val Ala
          180          185          190
Pro Ser Xaa Xaa Leu Tyr Ala Val Lys Val Leu Gly Xaa Xaa Gly Ser
          195          200          205
Gly Gln Tyr Ser Trp Ile Ile Asn Gly Ile Glu Trp Ala Ile Ala Asn
          210          215          220
Asn Met Asp Val Ile Asn Met Ser Leu Gly Gly Pro Ser Gly Ser Ala
          225          230          235          240
Ala Leu Lys Ala Ala Val Asp Lys Ala Val Ala Ser Gly Val Val Val
          245          250          255
Val Ala Ala Ala Gly Asn Glu Gly Xaa Xaa Gly Ser Ser Ser Thr Val
          260          265          270
Gly Tyr Pro Gly Lys Tyr Pro Ser Val Ile Ala Val Gly Ala Val Asp
          275          280          285
Ser Ser Asn Gln Arg Ala Ser Phe Ser Ser Val Gly Pro Glu Leu Asp
          290          295          300
Val Met Ala Pro Gly Val Ser Ile Gln Ser Thr Leu Pro Gly Asn Lys
          305          310          315          320
Tyr Gly Ala Tyr Asn Gly Thr Ser Met Ala Ser Pro His Val Ala Gly
          325          330          335
Ala Ala Ala Leu Ile Leu Ser Lys His Pro Asn Trp Thr Asn Thr Gln
          340          345          350
Val Arg Ser Ser Leu Xaa Asn Thr Thr Lys Leu Gly Asp Ser Phe
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Tyr Tyr Gly Lys Gly Leu Ile Asn Val Gln Ala Ala Ala Gln
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35 40 45

Ser Phe Val Pro Ser Glu Thr Asn Pro Tyr Gln Asp Gly Ser Ser His
50 55 60

Gly Thr His Val Ala Gly Thr Ile Ala Ala Leu Asn Asn Ser Ile Gly
65 70 75 80

Val Leu Gly Val Ser Pro Ser Ala Ser Leu Tyr Ala Val Lys Val Leu
85 90 95

Asp Ser Thr Gly Ser Gly Gln Tyr Ser Trp Ile Ile Asn Gly Ile Glu
100 105 110

Trp Ala Ile Ser Asn Asn Met Asp Val Ile Asn Met Ser Leu Gly Gly
115 120 125

Pro Thr Gly Ser Thr Ala Leu Lys Thr Val Val Asp Lys Ala Val Ser
130 135 140

Ser Gly Ile Val Val Ala Ala Ala Ala Gly Asn Glu Gly Ser Ser Gly
145 150 155 160

Ser Thr Ser Thr Val Gly Tyr Pro Ala Lys Tyr Pro Ser Thr Ile Ala
165 170 175

Val Gly Ala Val Asn Ser Ser Asn Gln Arg Ala Ser Phe Ser Ser Ala
180 185 190

Gly Ser Glu Leu Asp Val Met Ala Pro Gly Val Ser Ile Gln Ser Thr
195 200 205

Leu Pro Gly Gly Thr Tyr Gly Ala Tyr Asn Gly Thr Ser Met Ala Thr
210 215 220

Pro His Val Ala Gly Ala Ala Ala Leu Ile Leu Ser Lys His Pro Thr
225 230 235 240

Trp Thr Asn Ala Gln Val Arg Asp Arg Leu Glu Ser Thr Ala Thr Tyr
245 250 255

Leu Gly Asn Ser Phe Tyr Tyr Gly Lys Gly Leu Ile Asn Val Gln Ala
260 265 270

Ala Ala Gln
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<211> 274

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<213> Bacillus licheniformis

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Ser Phe Val Ala Gly Glu Ala Tyr Asn Thr Asp Gly Asn Gly His Gly	50	55	60
Thr His Val Ala Gly Thr Val Ala Ala Leu Asp Asn Thr Thr Gly Val	65	70	75
Leu Gly Val Ala Pro Ser Val Ser Leu Tyr Ala Val Lys Val Leu Asn	85	90	95
Ser Ser Gly Ser Gly Ser Tyr Ser Gly Ile Val Ser Gly Ile Glu Trp	100	105	110
Ala Thr Thr Asn Gly Met Asp Val Ile Asn Met Ser Leu Gly Gly Ala	115	120	125
Ser Gly Ser Thr Ala Met Lys Gln Ala Val Asp Asn Ala Tyr Ala Arg	130	135	140
Gly Val Val Val Val Ala Ala Ala Gly Asn Ser Gly Asn Ser Gly Ser	145	150	155
Thr Asn Thr Ile Gly Tyr Pro Ala Lys Tyr Asp Ser Val Ile Ala Val	165	170	175
Gly Ala Val Asp Ser Asn Ser Asn Arg Ala Ser Phe Ser Ser Val Gly	180	185	190
Ala Glu Leu Glu Val Met Ala Pro Gly Ala Gly Val Tyr Ser Thr Tyr	195	200	205
Pro Thr Asn Thr Tyr Ala Thr Leu Asn Gly Thr Ser Met Ala Ser Pro	210	215	220
His Val Ala Gly Ala Ala Ala Leu Ile Leu Ser Lys His Pro Asn Leu	225	230	235
Ser Ala Ser Gln Val Arg Asn Arg Leu Ser Ser Thr Ala Thr Tyr Leu	245	250	255
Gly Ser Ser Phe Tyr Tyr Gly Lys Gly Leu Ile Asn Val Glu Ala Ala	260	265	270
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<213> Bacillus lentus

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35 40 45

Phe Val Pro Gly Glu Pro Ser Thr Gln Asp Gly Asn Gly His Gly Thr
50 55 60

His Val Ala Gly Thr Ile Ala Ala Leu Asn Asn Ser Ile Gly Val Leu
65 70 75 80

Gly Val Ala Pro Ser Ala Glu Leu Tyr Ala Val Lys Val Leu Gly Ala
85 90 95

Ser Gly Ser Gly Ser Val Ser Ser Ile Ala Gln Gly Leu Glu Trp Ala
100 105 110

Gly Asn Asn Gly Met His Val Ala Asn Leu Ser Leu Gly Ser Pro Ser
115 120 125

Pro Ser Ala Thr Leu Glu Gln Ala Val Asn Ser Ala Thr Ser Arg Gly
130 135 140

Val Leu Val Val Ala Ala Ser Gly Asn Ser Gly Ala Gly Ser Ile Ser
145 150 155 160

Tyr Pro Ala Arg Tyr Ala Asn Ala Met Ala Val Gly Ala Thr Asp Gln
165 170 175

Asn Asn Asn Arg Ala Ser Phe Ser Gln Tyr Gly Ala Gly Leu Asp Ile
180 185 190

Val Ala Pro Gly Val Asn Val Gln Ser Thr Tyr Pro Gly Ser Thr Tyr
195 200 205

Ala Ser Leu Asn Gly Thr Ser Met Ala Thr Pro His Val Ala Gly Ala
210 215 220

Ala Ala Leu Val Lys Gln Lys Asn Pro Ser Trp Ser Asn Val Gln Ile
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Arg Asn His Leu Lys Asn Thr Ala Thr Ser Leu Gly Ser Thr Asn Leu
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Tyr Gly Ser Gly Leu Val Asn Ala Glu Ala Ala Thr Arg
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<211> 15

<212> PRT
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<213> Artificial Sequence

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<210> 11
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<212> PRT
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<223> Description of Artificial Sequence: Synthetic

<400> 42

Gly Ser Val Ser Ser Ile Ala Gln Gly Leu Glu Trp Ala Gly Asn
1 5 10 15

<210> 43

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<223> Description of Artificial Sequence: Synthetic

<400> 43

Ser Ser Ile Ala Gln Gly Leu Glu Trp Ala Gly Asn Asn Gly Met
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<210> 44

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<212> PRT

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<223> Description of Artificial Sequence: Synthetic

<400> 44

Ala Gln Gly Leu Glu Trp Ala Gly Asn Asn Gly Met His Val Ala
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<210> 45

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<223> Description of Artificial Sequence: Synthetic

<400> 45

Leu Glu Trp Ala Gly Asn Asn Gly Met His Val Ala Asn Leu Ser
1 5 10 15

<210> 46

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<212> PRT

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<223> Description of Artificial Sequence: Synthetic

<400> 46

Ala Gly Asn Asn Gly Met His Val Ala Asn Leu Ser Leu Gly Ser
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<210> 47

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<223> Description of Artificial Sequence: Synthetic

<400> 47

Asn Gly Met His Val Ala Asn Leu Ser Leu Gly Ser Pro Ser Pro
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<223> Description of Artificial Sequence: Synthetic

<400> 48

His Val Ala Asn Leu Ser Leu Gly Ser Pro Ser Pro Ser Ala Thr
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<223> Description of Artificial Sequence: Synthetic

<400> 49

Asn Leu Ser Leu Gly Ser Pro Ser Pro Ser Ala Thr Leu Glu Gln
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<210> 50

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<400> 50

Leu Gly Ser Pro Ser Pro Ser Ala Thr Leu Glu Gln Ala Val Asn
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1 5 10 15

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<220>
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<400> 52
Ser Ala Thr Leu Glu Gln Ala Val Asn Ser Ala Thr Ser Arg Gly
1 5 10 15

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<220>
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<400> 53
Leu Glu Gln Ala Val Asn Ser Ala Thr Ser Arg Gly Val Leu Val
1 5 10 15

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<400> 54
Ala Val Asn Ser Ala Thr Ser Arg Gly Val Leu Val Val Ala Ala
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<400> 55
Ser Ala Thr Ser Arg Gly Val Leu Val Val Ala Ala Ser Gly Asn
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<400> 56
Ser Arg Gly Val Leu Val Val Ala Ala Ser Gly Asn Ser Gly Ala
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<400> 57
Val Leu Val Val Ala Ala Ser Gly Asn Ser Gly Ala Gly Ser Ile
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<400> 58
Val Ala Ala Ser Gly Asn Ser Gly Ala Gly Ser Ile Ser Tyr Pro
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<400> 59
Ser Gly Asn Ser Gly Ala Gly Ser Ile Ser Tyr Pro Ala Arg Tyr

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<400> 61
 Gly Ser Ile Ser Tyr Pro Ala Arg Tyr Ala Asn Ala Met Ala Val
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<400> 62
 Ser Tyr Pro Ala Arg Tyr Ala Asn Ala Met Ala Val Gly Ala Thr
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<400> 63
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<220>
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<400> 65
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<400> 67
Asp Gln Asn Asn Asn Arg Ala Ser Phe Ser Gln Tyr Gly Ala Gly
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<400> 68

Asn Asn Arg Ala Ser Phe Ser Gln Tyr Gly Ala Gly Leu Asp Ile
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<210> 69

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<220>

<223> Description of Artificial Sequence: Synthetic

<400> 69

Ala Ser Phe Ser Gln Tyr Gly Ala Gly Leu Asp Ile Val Ala Pro
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<210> 70

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<223> Description of Artificial Sequence: Synthetic

<400> 70

Ser Gln Tyr Gly Ala Gly Leu Asp Ile Val Ala Pro Gly Val Asn
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<211> 15

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<223> Description of Artificial Sequence: Synthetic

<400> 71

Gly Ala Gly Leu Asp Ile Val Ala Pro Gly Val Asn Val Gln Ser
1 5 10 15

<210> 72

<211> 15

<212> PRT

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<223> Description of Artificial Sequence: Synthetic

<400> 72

Leu Asp Ile Val Ala Pro Gly Val Asn Val Gln Ser Thr Tyr Pro
1 5 10 15

<210> 73
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<212> PRT
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<400> 73
Val Ala Pro Gly Val Asn Val Gln Ser Thr Tyr Pro Gly Ser Thr
1 5 10 15

<210> 74
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<400> 74
Gly Val Asn Val Gln Ser Thr Tyr Pro Gly Ser Thr Tyr Ala Ser
1 5 10 15

<210> 75
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<400> 75
Val Gln Ser Thr Tyr Pro Gly Ser Thr Tyr Ala Ser Leu Asn Gly
1 5 10 15

<210> 76
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<220>
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<400> 76
Thr Tyr Pro Gly Ser Thr Tyr Ala Ser Leu Asn Gly Thr Ser Met
1 5 10 15

<210> 77
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<220>

<223> Description of Artificial Sequence: Synthetic

<400> 77

Gly Ser Thr Tyr Ala Ser Leu Asn Gly Thr Ser Met Ala Thr Pro
1 5 10 15

<210> 78

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 78

Tyr Ala Ser Leu Asn Gly Thr Ser Met Ala Thr Pro His Val Ala
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<210> 79

<211> 15

<212> PRT

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<220>

<223> Description of Artificial Sequence: Synthetic

<400> 79

Leu Asn Gly Thr Ser Met Ala Thr Pro His Val Ala Gly Ala Ala
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<210> 80

<211> 15

<212> PRT

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<223> Description of Artificial Sequence: Synthetic

<400> 80

Thr Ser Met Ala Thr Pro His Val Ala Gly Ala Ala Ala Leu Val
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<210> 81

<211> 15

<212> PRT

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<220>

<223> Description of Artificial Sequence: Synthetic

<400> 81

Ala Thr Pro His Val Ala Gly Ala Ala Ala Leu Val Lys Gln Lys
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<210> 82
 <211> 15
 <212> PRT
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<220>
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<400> 82
 Gly Val Ala Gly Ala Ala Ala Leu Val Lys Gln Lys Asn Pro Ser
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<210> 83
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<220>
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<400> 83
 Gly Ala Ala Ala Leu Val Lys Gln Lys Asn Pro Ser Trp Ser Asn
 1 5 10 15

<210> 84
 <211> 15
 <212> PRT
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<220>
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<400> 84
 Ala Leu Val Lys Gln Lys Asn Pro Ser Trp Ser Asn Val Gln Ile
 1 5 10 15

<210> 85
 <211> 15
 <212> PRT
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<400> 85
 Lys Gln Lys Asn Pro Ser Trp Ser Val Asn Gln Ile Arg Asn His
 1 5 10 15

<210> 86

<211> 15
<212> PRT
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 86
Asn Pro Ser Trp Ser Asn Val Gln Ile Arg Asn His Leu Lys Asn
1 5 10 15

<210> 87
<211> 15
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 87
Trp Ser Asn Val Gln Ile Arg Asn His Leu Lys Asn Thr Ala Thr
1 5 10 15

<210> 88
<211> 15
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<223> Description of Artificial Sequence: Synthetic

<400> 88
Val Gln Ile Arg Asn His Leu Lys Asn Thr Ala Thr Ser Leu Gly
1 5 10 15

<210> 89
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<223> Description of Artificial Sequence: Synthetic

<400> 89
Arg Asn His Leu Lys Asn Thr Ala Thr Ser Leu Gly Ser Thr Asn
1 5 10 15

<210> 90
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<223> Description of Artificial Sequence: Synthetic

<400> 90

Leu Lys Asn Thr Ala Thr Ser Leu Gly Ser Thr Asn Leu Tyr Gly
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<210> 91

<211> 15

<212> PRT

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<223> Description of Artificial Sequence: Synthetic

<400> 91

Thr Ala Thr Ser Leu Gly Ser Thr Asn Leu Tyr Gly Ser Gly Leu
1 5 10 15

<210> 92

<211> 15

<212> PRT

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<223> Description of Artificial Sequence: Synthetic

<400> 92

Ser Leu Gly Ser Thr Asn Leu Tyr Gly Ser Gly Leu Val Asn Ala
1 5 10 15

<210> 93

<211> 15

<212> PRT

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<223> Description of Artificial Sequence: Synthetic

<400> 93

Ser Thr Asn Leu Tyr Gly Ser Gly Leu Val Asn Ala Glu Ala Ala
1 5 10 15

<210> 94

<211> 15

<212> PRT

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<223> Description of Artificial Sequence: Synthetic

<400> 94

Asn Leu Tyr Gly Ser Gly Leu Val Asn Ala Glu Ala Ala Thr Arg
1 5 10 15

<210> 95
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<400> 95
Asp Ala Glu Leu His Ile Phe Arg Val Phe Thr Asn Asn Gln Val
1 5 10 15

<210> 96
<211> 15
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<223> Description of Artificial Sequence: Synthetic

<400> 96
Pro Leu Arg Arg Ala Ser Leu Ser Leu Gly Ser Gly Phe Trp His
1 5 10 15

<210> 97
<211> 15
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 97
Arg Ala Ser Leu Ser Leu Gly Ser Gly Phe Trp His Ala Thr Gly
1 5 10 15

<210> 98
<211> 15
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<223> Description of Artificial Sequence: Synthetic

<400> 98
Leu Ser Leu Gly Ser Gly Phe Trp His Ala Thr Gly Arg His Ser
1 5 10 15

<210> 99
<211> 15
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<223> Description of Artificial Sequence: Synthetic

<400> 99

Gly Ser Gly Phe Trp His Ala Thr Gly Arg His Ser Ser Arg Arg
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<210> 100

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 100

Phe Trp His Ala Thr Gly Arg His Ser Ser Arg Arg Leu Leu Arg
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<210> 101

<211> 15

<212> PRT

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<223> Description of Artificial Sequence: Synthetic

<400> 101

Ala Thr Gly Arg His Ser Ser Arg Arg Leu Leu Arg Ala Ile Pro
1 5 10 15

<210> 102

<211> 15

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<223> Description of Artificial Sequence: Synthetic

<400> 102

Arg His Ser Ser Arg Arg Leu Leu Arg Ala Ile Pro Arg Gln Val
1 5 10 15

<210> 103

<211> 15

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic

<400> 103
 Ser Arg Arg Leu Leu Arg Ala Ile Pro Arg Gln Val Ala Gln Thr
 1 5 10 15

<210> 104
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<400> 104
 Leu Leu Arg Ala Ile Pro Arg Gln Val Ala Gln Thr Leu Gln Ala
 1 5 10 15

<210> 105
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<220>
 <223> Description of Artificial Sequence: Synthetic

<400> 105
 Ala Ile Pro Arg Gln Val Ala Gln Thr Leu Gln Ala Asp Val Leu
 1 5 10 15

<210> 106
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<220>
 <223> Description of Artificial Sequence: Synthetic

<400> 106
 Arg Gln Val Ala Gln Thr Leu Gln Ala Asp Val Leu Trp Gln Met
 1 5 10 15

<210> 107
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<220>
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<400> 107
 Ala Gln Thr Leu Gln Ala Asp Val Leu Trp Gln Met Gly Tyr Thr
 1 5 10 15

<210> 108
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<400> 108
 Leu Gln Ala Asp Val Leu Trp Gln Met Gly Tyr Thr Gly Ala Asn
 1 5 10 15

<210> 109
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<220>
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<400> 109
 Asp Val Leu Trp Gln Met Gly Tyr Thr Gly Ala Asn Val Arg Val
 1 5 10 15

<210> 110
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<220>
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<400> 110
 Trp Gln Met Gly Tyr Thr Gly Ala Asn Val Arg Val Ala Val Phe
 1 5 10 15

<210> 111
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<220>
 <223> Description of Artificial Sequence: Synthetic

<400> 111
 Gly Tyr Thr Gly Ala Asn Val Arg Val Ala Val Phe Asp Thr Gly
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<210> 112
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<220>
 <223> Description of Artificial Sequence: Synthetic

 <400> 112
 Gly Ala Asn Val Arg Val Ala Val Phe Asp Thr Gly Leu Ser Glu
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 <400> 113
 Val Arg Val Ala Val Phe Asp Thr Gly Leu Ser Glu Lys His Pro
 1 5 10 15

 <210> 114
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 <212> PRT
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 <223> Description of Artificial Sequence: Synthetic

 <400> 114
 Ala Val Phe Asp Thr Gly Leu Ser Glu Lys His Pro His Phe Lys
 1 5 10 15

 <210> 115
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 <212> PRT
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 <223> Description of Artificial Sequence: Synthetic

 <400> 115
 Asp Thr Gly Leu Ser Glu Lys His Pro His Phe Lys Asn Val Lys
 1 5 10 15

 <210> 116
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 <223> Description of Artificial Sequence: Synthetic

 <400> 116
 Leu Ser Glu Lys His Pro His Phe Lys Asn Val Lys Glu Arg Thr

<212> PRT
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 121
Asn Trp Thr Asn Glu Arg Thr Leu Asp Asp Gly Leu Gly His Gly
1 5 10 15

<210> 122
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<212> PRT
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 122
Asn Glu Arg Thr Leu Asp Asp Gly Leu Gly His Gly Thr Phe Val
1 5 10 15

<210> 123
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<212> PRT
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 123
Thr Leu Asp Asp Gly Leu Gly His Gly Thr Phe Val Ala Gly Val
1 5 10 15

<210> 124
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<223> Description of Artificial Sequence: Synthetic

<400> 124
Asp Gly Leu Gly His Gly Thr Phe Val Ala Gly Val Ile Ala Ser
1 5 10 15

<210> 125
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<212> PRT
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 125
 Gly His Gly Thr Phe Val Ala Gly Val Ile Ala Ser Met Arg Glu
 1 5 10 15

<210> 126
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<220>
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<400> 126
 Thr Phe Val Ala Gly Val Ile Ala Ser Met Arg Glu Cys Gln Gly
 1 5 10 15

<210> 127
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<220>
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<400> 127
 Ala Gly Val Ile Ala Ser Met Arg Glu Cys Gln Gly Phe Ala Pro
 1 5 10 15

<210> 128
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<220>
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<400> 128
 Ile Ala Ser Met Arg Glu Cys Gln Gly Phe Ala Pro Asp Ala Glu
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<220>
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<400> 129
 Met Arg Glu Cys Gln Gly Phe Ala Pro Asp Ala Glu Leu His Ile
 1 5 10 15

<210> 130
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 130
Cys Gln Gly Phe Ala Pro Asp Ala Glu Leu His Ile Phe Arg Val
1 5 10 15

<210> 131
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 131
Phe Ala Pro Asp Ala Glu Leu His Ile Phe Arg Val Phe Thr Asn
1 5 10 15

<210> 132
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 132
Asp Ala Glu Leu His Ile Phe Arg Val Phe Thr Asn Asn Gln Val
1 5 10 15

<210> 133
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 133
Leu His Ile Phe Arg Val Phe Thr Asn Asn Gln Val Ser Tyr Thr
1 5 10 15

<210> 134
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<400> 134
Phe Arg Val Phe Thr Asn Asn Gln Val Ser Tyr Thr Ser Trp Phe
1 5 10 15

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<400> 135
Phe Thr Asn Asn Gln Val Ser Tyr Thr Ser Trp Phe Leu Asp Ala
1 5 10 15

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<400> 136
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1 5 10 15

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<400> 137
Ser Tyr Thr Ser Trp Phe Leu Asp Ala Phe Asn Tyr Ala Ile Leu
1 5 10 15

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<400> 138

Ser Trp Phe Leu Asp Ala Phe Asn Tyr Ala Ile Leu Lys Lys Ile
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<220>
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<400> 139
 Leu Asp Ala Phe Asn Tyr Ala Ile Leu Lys Lys Ile Asp Val Leu
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<210> 140
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<400> 140
 Phe Asn Tyr Ala Ile Leu Lys Lys Ile Asp Val Leu Asn Leu Ser
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<210> 141
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<400> 141
 Ala Ile Leu Lys Lys Ile Asp Val Leu Asn Leu Ser Ile Gly Gly
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<210> 142
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<400> 142
 Lys Lys Ile Asp Val Leu Asn Leu Ser Ile Gly Gly Pro Asp Phe
 1 5 10 15

<210> 143

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<400> 143
Asp Val Leu Asn Leu Ser Ile Gly Gly Pro Asp Phe Met Asp His
1 5 10 15

<210> 144
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<223> Description of Artificial Sequence: Synthetic

<400> 144
Asn Leu Ser Ile Gly Gly Pro Asp Phe Met Asp His Pro Phe Val
1 5 10 15

<210> 145
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 145
Ile Gly Gly Pro Asp Phe Met Asp His Pro Phe Val Asp Lys Val
1 5 10 15

<210> 146
<211> 15
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<220>
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<400> 146
Pro Asp Phe Met Asp His Pro Phe Val Asp Lys Val Trp Glu Leu
1 5 10 15

<210> 147
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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic

<400> 147

Met Asp His Pro Phe Val Asp Lys Val Trp Glu Leu Thr Ala Asn
1 5 10 15

<210> 148

<211> 15

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic

<400> 148

Pro Phe Val Asp Lys Val Trp Glu Leu Thr Ala Asn Asn Val Ile
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<210> 149

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<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 149

Asp Lys Val Trp Glu Leu Thr Ala Asn Asn Val Ile Met Val Ser
1 5 10 15

<210> 150

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<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 150

Trp Glu Leu Thr Ala Asn Asn Val Ile Met Val Ser Ala Ile Gly
1 5 10 15

<210> 151

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic

<400> 151

Thr Ala Asn Asn Val Ile Met Val Ser Ala Ile Gly Asn Asp Gly
1 5 10 15

<210> 152
 <211> 15
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<220>
 <223> Description of Artificial Sequence: Synthetic

<400> 152
 Asn Val Ile Met Val Ser Ala Ile Gly Asn Asp Gly Pro Leu Tyr
 1 5 10 15

<210> 153
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<220>
 <223> Description of Artificial Sequence: Synthetic

<400> 153
 Met Val Ser Ala Ile Gly Asn Asp Gly Pro Leu Tyr Gly Thr Ile
 1 5 10 15

<210> 154
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 <212> PRT
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<220>
 <223> Description of Artificial Sequence: Synthetic

<400> 154
 Ala Ile Gly Asn Asp Gly Pro Leu Tyr Gly Thr Leu Asn Asn Pro
 1 5 10 15

<210> 155
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic

<400> 155
 Asn Asp Gly Pro Leu Tyr Gly Thr Leu Asn Asn Pro Ala Asp Gln
 1 5 10 15

<210> 156
 <211> 15
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<220>

<223> Description of Artificial Sequence: Synthetic

<400> 156

Pro	Leu	Tyr	Gly	Thr	Leu	Asn	Asn	Pro	Ala	Asp	Gln	Met	Asp	Val
1				5				10				15		

<210> 157

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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 157

Gly	Thr	Leu	Asn	Asn	Pro	Ala	Asp	Gln	Met	Asp	Val	Ile	Gly	Val
1				5				10				15		

<210> 158

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 158

Asn	Asn	Pro	Ala	Asp	Gln	Met	Asp	Val	Ile	Gly	Val	Gly	Gly	Ile
1				5				10				15		

<210> 159

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<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 159

Ala	Asp	Gln	Met	Asp	Val	Ile	Gly	Val	Gly	Gly	Ile	Asp	Phe	Glu
1				5				10				15		

<210> 160

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic

<400> 160

Met Asp Val Ile Gly Val Gly Gly Ile Asp Phe Glu Asp Asn Ile
1 5 10 15

<210> 161

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 161

Ile Gly Val Gly Gly Ile Asp Phe Glu Asp Asn Ile Ala Arg Phe
1 5 10 15

<210> 162

<211> 15

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<220>

<223> Description of Artificial Sequence: Synthetic

<400> 162

Gly Gly Ile Asp Phe Glu Asp Asn Ile Ala Arg Phe Ser Ser Arg
1 5 10 15

<210> 163

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 163

Asp Phe Glu Asp Asn Ile Ala Arg Phe Ser Ser Arg Gly Met Thr
1 5 10 15

<210> 164

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 164

Asp Asn Ile Ala Arg Phe Ser Ser Arg Gly Met Thr Thr Trp Glu
1 5 10 15

<210> 165
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 165
Ala Arg Phe Ser Ser Arg Gly Met Thr Thr Trp Glu Leu Pro Gly
1 5 10 15

<210> 166
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 166
Ser Ser Arg Gly Met Thr Thr Trp Glu Leu Pro Gly Gly Tyr Gly
1 5 10 15

<210> 167
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 167
Gly Met Thr Thr Trp Glu Leu Pro Gly Gly Tyr Gly Arg Met Lys
1 5 10 15

<210> 168
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 168
Thr Trp Glu Leu Pro Gly Gly Tyr Gly Arg Met Lys Pro Asp Ile
1 5 10 15

<210> 169
<211> 15
<212> PRT
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1 5 10 15

<210> 174
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<220>
 <223> Description of Artificial Sequence: Synthetic

<400> 174
 Gly Ala Gly Val Arg Gly Ser Gly Val Lys Gly Gly Cys Arg Ala
 1 5 10 15

<210> 175
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<220>
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<400> 175
 Val Arg Gly Ser Gly Val Lys Gly Gly Cys Arg Ala Leu Ser Gly
 1 5 10 15

<210> 176
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<220>
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<400> 176
 Ser Gly Val Lys Gly Gly Cys Arg Ala Leu Ser Gly Thr Ser Val
 1 5 10 15

<210> 177
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<220>
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<400> 177
 Lys Gly Gly Cys Arg Ala Leu Ser Gly Thr Ser Val Ala Ser Pro
 1 5 10 15

<210> 178
 <211> 15

<212> PRT
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 178
Cys Arg Ala Leu Ser Gly Thr Ser Val Ala Ser Pro Val Val Ala
1 5 10 15

<210> 179
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 179
Leu Ser Gly Thr Ser Val Ala Ser Pro Val Val Ala Gly Ala Val
1 5 10 15

<210> 180
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 180
Thr Ser Val Ala Ser Pro Val Val Ala Gly Ala Val Thr Leu Leu
1 5 10 15

<210> 181
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<212> PRT
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<223> Description of Artificial Sequence: Synthetic

<400> 181
Ala Ser Pro Val Val Ala Gly Ala Val Thr Leu Leu Val Ser Thr
1 5 10 15

<210> 182
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<212> PRT
<213> Artificial Sequence

<220>
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<400> 182

Val Val Ala Gly Ala Val Thr Leu Leu Val Ser Thr Val Gln Lys
1 5 10 15

<210> 183

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<223> Description of Artificial Sequence: Synthetic

<400> 183

Gly Ala Val Thr Leu Leu Val Ser Thr Val Gln Lys Arg Glu Leu
1 5 10 15

<210> 184

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic

<400> 184

Thr Leu Leu Val Ser Thr Val Gln Lys Arg Glu Leu Val Asn Pro
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<210> 185

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<220>

<223> Description of Artificial Sequence: Synthetic

<400> 185

Val Ser Thr Val Gln Lys Arg Glu Leu Val Asn Pro Ala Ser Met
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<210> 186

<211> 15

<212> PRT

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<223> Description of Artificial Sequence: Synthetic

<400> 186

Val Gln Lys Arg Glu Leu Val Asn Pro Ala Ser Met Lys Gln Ala
1 5 10 15

<210> 187
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 187
Arg Glu Leu Val Asn Pro Ala Ser Met Lys Gln Ala Leu Ile Ala
1 5 10 15

<210> 188
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 188
Val Asn Pro Ala Ser Met Lys Gln Ala Leu Ile Ala Ser Ala Arg
1 5 10 15

<210> 189
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 189
Ala Ser Met Lys Gln Ala Leu Ile Ala Ser Ala Arg Arg Leu Pro
1 5 10 15

<210> 190
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 190
Lys Gln Ala Leu Ile Ala Ser Ala Arg Arg Leu Pro Gly Val Asn
1 5 10 15

<210> 191
<211> 15
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 191

Leu Ile Ala Ser Ala Arg Arg Leu Pro Gly Val Asn Met Phe Glu
1 5 10 15

<210> 192

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 192

Ser Ala Arg Arg Leu Pro Gly Val Asn Met Phe Glu Gln Gly His
1 5 10 15

<210> 193

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 193

Arg Leu Pro Gly Val Asn Met Phe Glu Gln Gly His Gly Lys Leu
1 5 10 15

<210> 194

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 194

Gly Val Asn Met Phe Glu Gln Gly His Gly Lys Leu Asp Leu Leu
1 5 10 15

<210> 195

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 195

Met Phe Glu Gln Gly His Gly Lys Leu Asp Leu Leu Arg Ala Tyr
 1 5 10 15

<210> 196

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 196

Gln Gly His Gly Lys Leu Asp Leu Leu Arg Ala Tyr Gln Ile Leu
 1 5 10 15

<210> 197

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 197

Gly Lys Leu Asp Leu Leu Arg Ala Tyr Gln Ile Leu Asn Ser Tyr
 1 5 10 15

<210> 198

<211> 15

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic

<400> 198

Asp Leu Leu Arg Ala Tyr Gln Ile Leu Asn Ser Tyr Lys Pro Gln
 1 5 10 15

<210> 199

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 199

Arg Ala Tyr Gln Ile Leu Asn Ser Tyr Lys Pro Gln Ala Ser Leu
 1 5 10 15

<210> 200

<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 200
Gln Ile Leu Asn Ser Tyr Lys Pro Gln Ala Ser Leu Ser Pro Ser
1 5 10 15

<210> 201
<211> 15
<212> PRT
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<220>
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<400> 201
Asn Ser Tyr Lys Pro Gln Ala Ser Leu Ser Pro Ser Tyr Ile Asp
1 5 10 15

<210> 202
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic

<400> 202
Lys Pro Gln Ala Ser Leu Ser Pro Ser Tyr Ile Asp Leu Thr Glu
1 5 10 15

<210> 203
<211> 15
<212> PRT
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<220>
<223> Description of Artificial Sequence: Synthetic

<400> 203
Ala Ser Leu Ser Pro Ser Tyr Ile Asp Leu Thr Glu Cys Pro Tyr
1 5 10 15

<210> 204
<211> 15
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 204

Ser Pro Ser Tyr Ile Asp Leu Thr Glu Cys Pro Tyr Met Trp Pro
1 5 10 15

<210> 205

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 205

Tyr Ile Asp Leu Thr Glu Cys Pro Tyr Met Trp Pro Tyr Cys Ser
1 5 10 15

<210> 206

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 206

Leu Thr Glu Cys Pro Tyr Met Trp Pro Tyr Cys Ser Gln Pro Ile
1 5 10 15

<210> 207

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 207

Cys Pro Tyr Met Trp Pro Tyr Cys Ser Gln Pro Ile Tyr Tyr Gly
1 5 10 15

<210> 208

<211> 1052

<212> PRT

<213> Homo sapiens

<400> 208

Met Lys Leu Val Asn Ile Trp Leu Leu Leu Val Val Leu Leu Cys
1 5 10 15

Gly Lys Lys His Leu Gly Asp Arg Leu Glu Lys Lys Ser Phe Glu Lys
20 25 30

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35						40						45			
Ser	Thr	Val	Val	Glu	Tyr	Glu	Tyr	Ile	Val	Ala	Phe	Asn	Gly	Tyr	Phe
50						55						60			
Thr	Ala	Lys	Ala	Arg	Asn	Ser	Phe	Ile	Ser	Ser	Ala	Leu	Lys	Ser	Ser
65				70						75				80	
Glu	Val	Asp	Asn	Trp	Arg	Ile	Ile	Pro	Arg	Asn	Asn	Pro	Ser	Ser	Asp
				85				90						95	
Tyr	Pro	Ser	Asp	Phe	Glu	Val	Ile	Gln	Ile	Lys	Glu	Lys	Gln	Lys	Ala
		100						105						110	
Gly	Leu	Leu	Thr	Leu	Glu	Asp	His	Pro	Asn	Ile	Lys	Arg	Val	Thr	Pro
115						120						125			
Gln	Arg	Lys	Val	Phe	Arg	Ser	Leu	Lys	Tyr	Ala	Glu	Ser	Asp	Pro	Thr
130						135						140			
Val	Pro	Cys	Asn	Glu	Thr	Arg	Trp	Ser	Gln	Lys	Trp	Gln	Ser	Ser	Arg
145				150						155				160	
Pro	Leu	Arg	Arg	Ala	Ser	Leu	Ser	Leu	Gly	Ser	Gly	Phe	Trp	His	Ala
				165				170						175	
Thr	Gly	Arg	His	Ser	Ser	Arg	Arg	Leu	Leu	Arg	Ala	Ile	Pro	Arg	Gln
		180						185				190			
Val	Ala	Gln	Thr	Leu	Gln	Ala	Asp	Val	Leu	Trp	Gln	Met	Gly	Tyr	Thr
195						200						205			
Gly	Ala	Asn	Val	Arg	Val	Ala	Val	Phe	Asp	Thr	Gly	Leu	Ser	Glu	Lys
210						215						220			
His	Pro	His	Phe	Lys	Asn	Val	Lys	Glu	Arg	Thr	Asn	Trp	Thr	Asn	Glu
225				230						235				240	
Arg	Thr	Leu	Asp	Asp	Gly	Leu	Gly	His	Gly	Thr	Phe	Val	Ala	Gly	Val
				245				250						255	
Ile	Ala	Ser	Met	Arg	Glu	Cys	Gln	Gly	Phe	Ala	Pro	Asp	Ala	Glu	Leu
		260						265				270			
His	Ile	Phe	Arg	Val	Phe	Thr	Asn	Asn	Gln	Val	Ser	Tyr	Thr	Ser	Trp
275						280						285			
Phe	Leu	Asp	Ala	Phe	Asn	Tyr	Ala	Ile	Leu	Lys	Lys	Ile	Asp	Val	Leu
290						295						300			
Asn	Leu	Ser	Ile	Gly	Gly	Pro	Asp	Phe	Met	Asp	His	Pro	Phe	Val	Asp
305				310						315				320	
Lys	Val	Trp	Glu	Leu	Thr	Ala	Asn	Asn	Val	Ile	Met	Val	Ser	Ala	Ile
				325				330						335	

Gly	Asn	Asp	Gly	Pro	Leu	Tyr	Gly	Thr	Leu	Asn	Asn	Pro	Ala	Asp	Gln
			340				345						350		
Met	Asp	Val	Ile	Gly	Val	Gly	Gly	Ile	Asp	Phe	Glu	Asp	Asn	Ile	Ala
			355				360						365		
Arg	Phe	Ser	Ser	Arg	Gly	Met	Thr	Thr	Trp	Glu	Leu	Pro	Gly	Gly	Tyr
			370				375						380		
Gly	Arg	Met	Lys	Pro	Asp	Ile	Val	Thr	Tyr	Gly	Ala	Gly	Val	Arg	Gly
			385				390						395		
Ser	Gly	Val	Lys	Gly	Gly	Cys	Arg	Ala	Leu	Ser	Gly	Thr	Ser	Val	Ala
				405						410			415		
Ser	Pro	Val	Val	Ala	Gly	Ala	Val	Thr	Leu	Leu	Val	Ser	Thr	Val	Gln
			420				425						430		
Lys	Arg	Glu	Leu	Val	Asn	Pro	Ala	Ser	Met	Lys	Gln	Ala	Leu	Ile	Ala
			435				440						445		
Ser	Ala	Arg	Arg	Leu	Pro	Gly	Val	Asn	Met	Phe	Glu	Gln	Gly	His	Gly
			450				455						460		
Lys	Leu	Asp	Leu	Leu	Arg	Ala	Tyr	Gln	Ile	Leu	Asn	Ser	Tyr	Lys	Pro
			465				470						475		
Gln	Ala	Ser	Leu	Ser	Pro	Ser	Tyr	Ile	Asp	Leu	Thr	Glu	Cys	Pro	Tyr
				485						490			495		
Met	Trp	Pro	Tyr	Cys	Ser	Gln	Pro	Ile	Tyr	Tyr	Gly	Gly	Met	Pro	Thr
			500				505						510		
Val	Val	Asn	Val	Thr	Ile	Leu	Asn	Gly	Met	Gly	Val	Thr	Gly	Arg	Ile
			515				520						525		
Val	Asp	Lys	Pro	Asp	Trp	Gln	Pro	Tyr	Leu	Pro	Gln	Asn	Gly	Asp	Asn
			530				535						540		
Ile	Glu	Val	Ala	Phe	Ser	Tyr	Ser	Ser	Val	Leu	Trp	Pro	Trp	Ser	Gly
			545				550						555		
Tyr	Leu	Ala	Ile	Ser	Ile	Ser	Val	Thr	Lys	Lys	Ala	Ala	Ser	Trp	Glu
				565						570			575		
Gly	Ile	Ala	Gln	Gly	His	Val	Met	Ile	Thr	Val	Ala	Ser	Pro	Ala	Glu
			580				585						590		
Thr	Glu	Ser	Lys	Asn	Gly	Ala	Glu	Gln	Thr	Ser	Thr	Val	Lys	Leu	Pro
			595				600						605		
Ile	Lys	Val	Lys	Ile	Ile	Pro	Thr	Pro	Pro	Arg	Ser	Lys	Arg	Val	Leu
			610				615						620		
Trp	Asp	Gln	Tyr	His	Asn	Leu	Arg	Tyr	Pro	Pro	Gly	Tyr	Phe	Pro	Arg
			625				630						635		

Asp	Asn	Leu	Arg	Met	Lys	Asn	Asp	Pro	Leu	Asp	Trp	Asn	Gly	Asp	His		
				645					650					655			
Ile	His	Thr	Asn	Phe	Arg	Asp	Met	Tyr	Gln	His	Leu	Arg	Ser	Met	Gly		
			660					665					670				
Tyr	Phe	Val	Glu	Val	Leu	Gly	Ala	Pro	Phe	Thr	Cys	Phe	Asp	Ala	Ser		
		675					680					685					
Gln	Tyr	Gly	Thr	Leu	Leu	Met	Val	Asp	Ser	Glu	Glu	Glu	Tyr	Phe	Pro		
	690					695					700						
Glu	Glu	Ile	Ala	Lys	Leu	Arg	Arg	Asp	Val	Asp	Asn	Gly	Leu	Ser	Leu		
705					710				715						720		
Val	Ile	Phe	Ser	Asp	Trp	Tyr	Asn	Thr	Ser	Val	Met	Arg	Lys	Val	Lys		
			725						730				735				
Phe	Tyr	Asp	Glu	Asn	Thr	Arg	Gln	Trp	Trp	Met	Pro	Asp	Thr	Gly	Gly		
			740					745					750				
Ala	Asn	Ile	Pro	Ala	Leu	Asn	Glu	Leu	Leu	Ser	Val	Trp	Asn	Met	Gly		
		755					760					765					
Phe	Ser	Asp	Gly	Leu	Tyr	Glu	Gly	Glu	Phe	Thr	Leu	Ala	Asn	His	Asp		
	770					775					780						
Met	Tyr	Tyr	Ala	Ser	Gly	Cys	Ser	Ile	Ala	Lys	Phe	Pro	Glu	Asp	Gly		
785					790				795						800		
Val	Val	Ile	Thr	Gln	Thr	Phe	Lys	Asp	Gln	Gly	Leu	Glu	Val	Leu	Lys		
			805						810					815			
Gln	Glu	Thr	Ala	Val	Val	Glu	Asn	Val	Pro	Ile	Leu	Gly	Leu	Tyr	Gln		
			820					825					830				
Ile	Pro	Ala	Glu	Gly	Gly	Gly	Arg	Ile	Val	Leu	Tyr	Gly	Asp	Ser	Asn		
		835					840					845					
Cys	Leu	Asp	Asp	Ser	His	Arg	Gln	Lys	Asp	Cys	Phe	Trp	Leu	Leu	Asp		
	850					855					860						
Ala	Leu	Leu	Gln	Tyr	Thr	Ser	Tyr	Gly	Val	Thr	Pro	Pro	Ser	Leu	Ser		
865					870					875					880		
His	Ser	Gly	Asn	Arg	Gln	Arg	Pro	Pro	Ser	Gly	Ala	Gly	Ser	Val	Thr		
			885						890					895			
Pro	Glu	Arg	Met	Glu	Gly	Asn	His	Leu	His	Arg	Tyr	Ser	Lys	Val	Leu		
			900					905					910				
Glu	Ala	His	Leu	Gly	Asp	Pro	Lys	Pro	Arg	Pro	Leu	Pro	Ala	Cys	Pro		
		915					920					925					
Arg	Leu	Ser	Trp	Ala	Lys	Pro	Gln	Pro	Leu	Asn	Glu	Thr	Ala	Pro	Ser		
	930					935					940						

Asn Leu Trp Lys His Gln Lys Leu Leu Ser Ile Asp Leu Asp Lys Val
 945 950 955 960

Val Leu Pro Asn Phe Arg Ser Asn Arg Pro Gln Val Arg Pro Leu Ser
 965 970 975

Pro Gly Glu Ser Gly Ala Trp Asp Ile Pro Gly Gly Ile Met Pro Gly
 980 985 990

Arg Tyr Asn Gln Glu Val Gly Gln Thr Ile Pro Val Phe Ala Phe Leu
 995 1000 1005

Gly Ala Met Val Val Leu Ala Phe Phe Val Val Gln Ile Asn Lys Ala
 1010 1015 1020

Lys Ser Arg Pro Lys Arg Arg Lys Pro Arg Val Lys Arg Pro Gln Leu
 1025 1030 1035 1040

Met Gln Gln Val His Pro Pro Lys Thr Pro Ser Val
 1045 1050

<210> 209

<211> 280

<212> PRT

<213> Homo sapiens

<400> 209

Arg Ala Ile Pro Arg Gln Val Ala Gln Thr Leu Gln Ala Asp Val Leu
 1 5 10 15

Trp Gln Met Gly Tyr Thr Gly Ala Asn Val Arg Val Ala Val Phe Asp
 20 25 30

Thr Gly Leu Ser Glu Lys His Pro His Phe Lys Asn Val Lys Glu Arg
 35 40 45

Thr Asn Trp Thr Asn Glu Arg Thr Leu Asp Asp Gly Leu Gly His Gly
 50 55 60

Thr Phe Val Ala Gly Val Ile Ala Ser Met Arg Glu Cys Gln Gly Phe
 65 70 75 80

Ala Pro Asp Ala Glu Leu His Ile Phe Arg Val Phe Thr Asn Asn Gln
 85 90 95

Val Ser Tyr Thr Ser Trp Phe Leu Asp Ala Phe Asn Tyr Ala Ile Leu
 100 105 110

Lys Lys Ile Asp Val Leu Asn Leu Ser Ile Gly Gly Pro Asp Phe Met
 115 120 125

Asp His Pro Phe Val Asp Lys Val Trp Glu Leu Thr Ala Asn Asn Val
 130 135 140

Ile Met Val Ser Ala Ile Gly Asn Asp Gly Pro Leu Tyr Gly Thr Leu

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145              150              155              160
Asn Asn Pro Ala Asp Gln Met Asp Val Ile Gly Val Gly Gly Ile Asp
      165              170              175
Phe Glu Asp Asn Ile Ala Arg Phe Ser Ser Arg Gly Met Thr Thr Trp
      180              185              190
Glu Leu Pro Gly Gly Tyr Gly Arg Met Lys Pro Asp Ile Val Thr Tyr
      195              200              205
Gly Ala Gly Val Arg Gly Ser Gly Val Lys Gly Gly Cys Arg Ala Leu
      210              215              220
Ser Gly Thr Ser Val Ala Ser Pro Val Val Ala Gly Ala Val Thr Leu
225              230              235              240
Leu Val Ser Thr Val Gln Lys Arg Glu Leu Val Asn Pro Ala Ser Met
      245              250              255
Lys Gln Ala Leu Ile Ala Ser Ala Arg Arg Leu Pro Gly Val Asn Met
      260              265              270
Phe Glu Gln Gly His Gly Lys Leu
      275              280
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<210> 210

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<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 210

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<210> 211

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 211

```
Ala Ser Ile Ser Tyr Pro Ala Arg Tyr Ala Asn Ala Met Ala Val
  1              5              10              15
```

<210> 212

<211> 15

<212> PRT

<213> Artificial Sequence

Variable	Mean	SD	Min	Max
Age	34.5	10.2	18	65
Gender	0.45	0.50	0	1
Marital status	0.60	0.49	0	1
Education	12.5	1.5	9	16
Income	15.2	8.5	5	35
Occupation	1.2	0.8	0	2
Health status	1.8	0.5	1	3
Stress level	2.5	0.7	1	4
Life satisfaction	3.2	0.6	1	5
Resilience	2.8	0.9	1	5
Optimism	3.5	0.8	1	5
Self-efficacy	3.8	0.7	1	5
Emotional stability	3.0	0.6	1	5
Prosocial behavior	3.3	0.7	1	5
Empathy	3.6	0.8	1	5
Agreeableness	3.9	0.7	1	5
Conscientiousness	4.1	0.6	1	5
Neuroticism	2.2	0.5	1	5
Openness	3.7	0.8	1	5
Extraversion	3.4	0.7	1	5
Intelligence	4.0	0.6	1	5
Personality stability	3.1	0.6	1	5
Life goals	3.0	0.7	1	5
Values	3.5	0.8	1	5
Beliefs	3.2	0.7	1	5
Attitudes	3.8	0.6	1	5
Behaviors	3.6	0.7	1	5
Emotions	3.4	0.8	1	5
Thoughts	3.7	0.7	1	5
Feelings	3.3	0.6	1	5
Actions	3.9	0.7	1	5
Interactions	3.5	0.8	1	5
Relationships	3.2	0.7	1	5
Community involvement	3.0	0.6	1	5
Civic participation	3.1	0.7	1	5
Volunteering	3.3	0.8	1	5
Leadership	3.4	0.7	1	5
Teamwork	3.6	0.6	1	5
Conflict resolution	3.7	0.7	1	5
Decision making	3.8	0.8	1	5
Problem solving	3.9	0.7	1	5
Communication	4.0	0.6	1	5
Listening	4.1	0.7	1	5
Speaking	4.2	0.8	1	5
Writing	4.3	0.7	1	5
Reading	4.4	0.6	1	5
Learning	4.5	0.7	1	5
Teaching	4.6	0.8	1	5
Coaching	4.7	0.7	1	5
Supervising	4.8	0.6	1	5
Managing	4.9	0.7	1	5
Organizing	5.0	0.8	1	5

<400> 212

<210> 213

<211> 15

<212> PRT

<213> Artificial Sequence

$\langle 220 \rangle$

<223> Description of Artificial Sequence: Synthetic

<400> 213

Gly Ser Ala Ser Tyr Pro Ala Arg Tyr Ala Asn Ala Met Ala Val
1 5 10 15

<210> 214

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 214

Gly Ser Ile Ala Tyr Pro Ala Arg Tyr Ala Asn Ala Met Ala Val
1 5 10 15

<210> 215

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 215

Gly Ser Ile Ser Ala Pro Ala Arg Tyr Ala Asn Ala Met Ala Val
1 5 10 15

<210> 216

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

<400> 216

Gly Ser Ile Ser Tyr Ala Ala Arg Tyr Ala Asn Ala Met Ala Val
 1 5 10 15

<210> 217
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic

<400> 217
 Gly Ser Ile Ser Tyr Pro Ala Ala Tyr Ala Asn Ala Met Ala Val
 1 5 10 15

<210> 218
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic

<400> 218
 Gly Ser Ile Ser Tyr Pro Ala Arg Ala Ala Asn Ala Met Ala Val
 1 5 10 15

<210> 219
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic

<400> 219
 Gly Ser Ile Ser Tyr Pro Ala Arg Tyr Ala Ala Ala Met Ala Val
 1 5 10 15

<210> 220
 <211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic

<400> 220
 Gly Ser Ile Ser Tyr Pro Ala Arg Tyr Ala Asn Ala Ala Ala Val
 1 5 10 15

<210> 221

<211> 15
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic

<400> 221
 Gly Ser Ile Ser Tyr Pro Ala Arg Tyr Ala Asn Ala Met Ala Ala
 1 5 10 15

<210> 222
 <211> 15
 <212> PRT
 <213> Humicola insolens

<400> 222
 Pro Gly Gly Val Ala Tyr Ser Cys Ala Asp Gln Thr Pro Trp Ala
 1 5 10 15

<210> 223
 <211> 15
 <212> PRT
 <213> Humicola insolens

<400> 223
 Cys Gly Trp Ala Lys Lys Ala Pro Val Asn Gln Pro Val Phe Ser
 1 5 10 15

<210> 224
 <211> 276
 <212> PRT
 <213> Humicola insolens

<400> 224
 Met Arg Ser Ser Pro Leu Leu Pro Ser Ala Val Val Ala Ala Leu Pro
 1 5 10 15

Val Leu Ala Leu Ala Ala Asp Gly Arg Ser Thr Arg Tyr Trp Asp Cys
 20 25 30

Cys Lys Pro Ser Cys Gly Trp Ala Lys Lys Ala Pro Val Asn Gln Pro
 35 40 45

Val Phe Ser Cys Asn Ala Asn Phe Gln Arg Ile Thr Asp Phe Asp Ala
 50 55 60

Lys Ser Gly Cys Glu Pro Gly Gly Val Ala Tyr Ser Cys Ala Asp Gln
 65 70 75 80

Thr Pro Trp Ala Val Asn Asp Asp Phe Ala Leu Gly Phe Ala Ala Thr
 85 90 95

Ser Ile Ala Gly Ser Asn Glu Ala Gly Trp Cys Cys Ala Cys Tyr Glu

<210> 227
 <211> 291
 <212> PRT
 <213> Thermomyces lanuginosus

<400> 227

Met	Arg	Ser	Ser	Leu	Val	Leu	Phe	Phe	Val	Ser	Ala	Trp	Thr	Ala	Leu
1				5					10					15	
Ala	Ser	Pro	Ile	Arg	Arg	Glu	Val	Ser	Gln	Asp	Leu	Phe	Asn	Gln	Phe
			20					25					30		
Asn	Leu	Phe	Ala	Gln	Tyr	Ser	Ala	Ala	Ala	Tyr	Cys	Gly	Lys	Asn	Asn
		35					40					45			
Asp	Ala	Pro	Ala	Gly	Thr	Asn	Ile	Thr	Cys	Thr	Gly	Asn	Ala	Cys	Pro
	50					55					60				
Glu	Val	Glu	Lys	Ala	Asp	Ala	Thr	Phe	Leu	Tyr	Ser	Phe	Glu	Asp	Ser
65					70					75					80
Gly	Val	Gly	Asp	Val	Thr	Gly	Phe	Leu	Ala	Leu	Asp	Asn	Thr	Asn	Lys
				85					90					95	
Leu	Ile	Val	Leu	Ser	Phe	Arg	Gly	Ser	Arg	Ser	Ile	Glu	Asn	Trp	Ile
			100					105					110		
Gly	Asn	Leu	Asn	Phe	Asp	Leu	Lys	Glu	Ile	Asn	Asp	Ile	Cys	Ser	Gly
		115					120					125			
Cys	Arg	Gly	His	Asp	Gly	Phe	Thr	Ser	Ser	Trp	Arg	Ser	Val	Ala	Asp
		130				135					140				
Thr	Leu	Arg	Gln	Lys	Val	Glu	Asp	Ala	Val	Arg	Glu	His	Pro	Asp	Tyr
145					150					155					160
Arg	Val	Val	Phe	Thr	Gly	His	Ser	Leu	Gly	Gly	Ala	Leu	Ala	Thr	Val
				165					170					175	
Ala	Gly	Ala	Asp	Leu	Arg	Gly	Asn	Gly	Tyr	Asp	Ile	Asp	Val	Phe	Ser
			180					185					190		
Tyr	Gly	Ala	Pro	Arg	Val	Gly	Asn	Arg	Ala	Phe	Ala	Glu	Phe	Leu	Thr
		195					200					205			
Val	Gln	Thr	Gly	Gly	Thr	Leu	Tyr	Arg	Ile	Thr	His	Thr	Asn	Asp	Ile
	210					215					220				
Val	Pro	Arg	Leu	Pro	Pro	Arg	Glu	Phe	Gly	Tyr	Ser	His	Ser	Ser	Pro
225					230					235					240
Glu	Tyr	Trp	Ile	Lys	Ser	Gly	Thr	Leu	Val	Pro	Val	Thr	Arg	Asn	Asp
			245						250					255	
Ile	Val	Lys	Ile	Glu	Gly	Ile	Asp	Ala	Thr	Gly	Gly	Asn	Asn	Gln	Pro

260	265	270
Asn Ile Pro Asp Ile Pro Ala His Leu Trp Tyr Phe Gly Leu Ile Gly		
275	280	285
Thr Cys Leu		
290		
<210> 228		
<211> 15		
<212> PRT		
<213> Streptomyces plicatus		
<400> 228		
Ile Lys Val Leu Leu Ser Val Leu Gly Asn His Gln Gly Ala Gly		
1	5	10 15
<210> 229		
<211> 313		
<212> PRT		
<213> Streptomyces plicatus		
<400> 229		
Met Phe Thr Pro Val Arg Arg Arg Val Arg Thr Ala Ala Leu Ala Leu		
1	5	10 15
Ser Ala Ala Ala Ala Leu Val Leu Gly Ser Thr Ala Ala Ser Gly Ala		
	20	25 30
Ser Ala Thr Pro Ser Pro Ala Pro Ala Pro Ala Pro Ala Pro Val Lys		
	35	40 45
Gln Gly Pro Thr Ser Val Ala Tyr Val Glu Val Asn Asn Asn Ser Met		
	50	55 60
Leu Asn Val Gly Lys Tyr Thr Leu Ala Asp Gly Gly Gly Asn Ala Phe		
65	70	75 80
Asp Val Ala Val Ile Phe Ala Ala Asn Ile Asn Tyr Asp Thr Gly Thr		
	85	90 95
Lys Thr Ala Tyr Leu His Phe Asn Glu Asn Val Gln Arg Val Leu Asp		
	100	105 110
Asn Ala Val Thr Gln Ile Arg Pro Leu Gln Gln Gln Gly Ile Lys Val		
	115	120 125
Leu Leu Ser Val Leu Gly Asn His Gln Gly Ala Gly Phe Ala Asn Phe		
	130	135 140
Pro Ser Gln Gln Ala Ala Ser Ala Phe Ala Lys Gln Leu Ser Asp Ala		
145	150	155 160
Val Ala Lys Tyr Gly Leu Asp Gly Val Asp Phe Asp Asp Glu Tyr Ala		
	165	170 175

Glu Tyr Gly Asn Asn Gly Thr Ala Gln Pro Asn Asp Ser Ser Phe Val
 180 185 190
 His Leu Val Thr Ala Leu Arg Ala Asn Met Pro Asp Lys Ile Ile Ser
 195 200 205
 Leu Tyr Asn Ile Gly Pro Ala Ala Ser Arg Leu Ser Tyr Gly Gly Val
 210 215 220
 Asp Val Ser Asp Lys Phe Asp Tyr Ala Trp Asn Pro Tyr Tyr Gly Thr
 225 230 235 240
 Trp Gln Val Pro Gly Ile Ala Leu Pro Lys Ala Gln Leu Ser Pro Ala
 245 250 255
 Ala Val Glu Ile Gly Arg Thr Ser Arg Ser Thr Val Ala Asp Leu Ala
 260 265 270
 Arg Arg Thr Val Asp Glu Gly Tyr Gly Val Tyr Leu Thr Tyr Asn Leu
 275 280 285
 Asp Gly Gly Asp Arg Thr Ala Asp Val Ser Ala Phe Thr Arg Glu Leu
 290 295 300
 Tyr Gly Ser Glu Ala Val Arg Thr Pro
 305 310

<210> 230
 <211> 15
 <212> PRT
 <213> Bacillus amyloliquefaciens

<400> 230
 Gly Thr Val Ala Ala Leu Asn Asn Ser Ile Gly Val Leu Gly Val
 1 5 10 15

<210> 231
 <211> 15
 <212> PRT
 <213> Bacillus amyloliquefaciens

<400> 231
 Asn Gly Ile Glu Trp Ala Ile Ala Asn Asn Met Asp Val Ile Asn
 1 5 10 15

<210> 232
 <211> 15
 <212> PRT
 <213> Bacillus lentus

<400> 232
 Thr Gly Ser Gly Val Lys Val Ala Val Leu Asp Thr Gly Ile Ser
 1 5 10 15

<210> 233
 <211> 15
 <212> PRT
 <213> Bacillus lentus

<400> 233
 Ser Ala Glu Leu Tyr Ala Val Lys Val Leu Gly Ala Ser Gly Ser
 1 5 10 15

<210> 234
 <211> 17
 <212> PRT
 <213> Bacillus lentus

<400> 234
 Gly Ser Ile Ser Tyr Pro Ala Arg Tyr Ala Asn Ala Met Ala Val Gly
 1 5 10 15

Ala

<210> 235
 <211> 15
 <212> PRT
 <213> Bacillus lentus

<400> 235
 Gly Ala Gly Leu Asp Ile Val Ala Pro Gly Val Asn Val Gln Ser
 1 5 10 15

<210> 236
 <211> 272
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Hybrid of
 Bacillus lentus and Bacillus amyloliquefaciens

<400> 236
 Ala Gln Ser Val Pro Trp Gly Ile Ser Arg Val Gln Ala Pro Ala Ala
 1 5 10 15

His Asn Arg Gly Leu Thr Gly Ser Gly Val Lys Val Ala Val Leu Asp
 20 25 30

Thr Gly Ile Ser Thr His Pro Asp Leu Asn Ile Arg Gly Gly Ala Ser
 35 40 45

Phe Val Pro Gly Glu Pro Ser Thr Gln Asp Gly Asn Gly His Gly Thr
 50 55 60

His Val Ala Gly Thr Ile Ala Ala Leu Asn Asn Ser Ile Gly Val Leu
 65 70 75 80
 Gly Val Ala Pro Ser Ala Glu Leu Tyr Ala Val Lys Val Leu Gly Ala
 85 90 95
 Ser Gly Ser Gly Ser Val Ser Ser Ile Ala Gln Gly Leu Glu Trp Ala
 100 105 110
 Gly Asn Asn Gly Met His Val Ile Asn Met Ser Leu Gly Gly Ser Gly
 115 120 125
 Ser Ala Ala Leu Lys Ala Ala Val Asp Lys Ala Val Ala Ser Gly Val
 130 135 140
 Val Val Val Ala Ala Ala Gly Asn Glu Gly Thr Ser Gly Ser Ser Ser
 145 150 155 160
 Thr Val Gly Tyr Pro Gly Lys Tyr Pro Ser Val Ile Ala Val Gly Ala
 165 170 175
 Val Asp Ser Ser Asn Gln Arg Ala Ser Phe Ser Ser Val Gly Pro Glu
 180 185 190
 Leu Asp Val Met Ala Pro Gly Val Ser Ile Gln Ser Thr Leu Pro Gly
 195 200 205
 Asn Lys Tyr Gly Ala Tyr Asn Gly Thr Ser Met Ala Ser Pro His Val
 210 215 220
 Ala Gly Ala Ala Ala Leu Ile Leu Ser Lys His Pro Asn Trp Thr Asn
 225 230 235 240
 Thr Gln Val Arg Ser Ser Leu Glu Asn Thr Thr Thr Lys Leu Gly Asp
 245 250 255
 Ser Phe Tyr Tyr Gly Lys Gly Leu Ile Asn Val Gln Ala Ala Ala Gln
 260 265 270

<210> 237

<211> 15

<212> PRT

<213> Bacillus lentis subtilisin

<400> 237

Ile Ala Ala Leu Asn Asn Ser Ile Gly Val Leu Gly Val Ala Pro
 1 5 10 15

<210> 238

<211> 18

<212> PRT

<213> Bacillus lentis subtilisin

<400> 238

Leu Glu Trp Ala Gly Asn Asn Gly Met His Val Ala Asn Leu Ser Leu

